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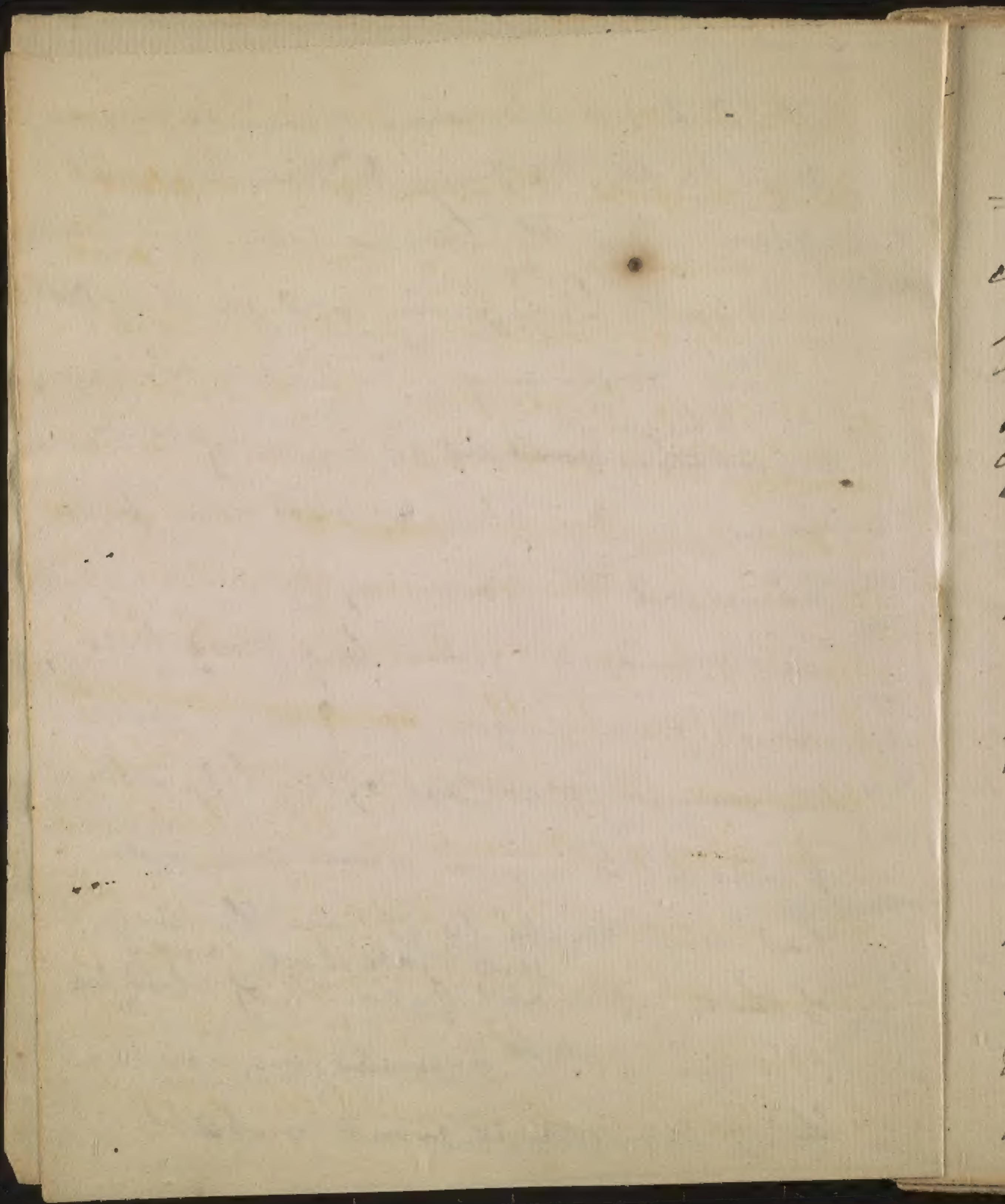
We come now to treat of the aphæmias or
fever. Before I enter upon this subject I
shall deliver some remarks upon the brain
and its appendages which are partly of a phys-
iological and partly of a pathological & practical
nature.

I taught you in our physiology ~~that~~
~~the Spleen in the~~ early part of our course ~~in our~~
treating upon the circulation of the blood,
I said that the ~~soother~~ ^{breaker} of our bodies had guard
against ~~the~~ inordinate or tumultuous
motions of the blood
by means of the Spleen when
the blood vessels were unusually excited through
out the whole system - by the Thymus
gland when it was ~~excited~~ ^{determined} in ~~an~~ an un-
usual quantity to the lungs, by the

the extirpation of the
are experienced

✓ I formerly reported from a fact so made
upon the Thyroid gland by Mr Cooper pro-
-ducing fatality in Dogs, that this gland was
- used to arrest and retain the blood when trans-
- ferribly determined to the brain. But from
~~opposition to my friend's experiments~~
to be from the small ^{caputus} size of that gland,
and from ~~and~~ any not admitting the
inferences of Mr Cooper's ~~first~~ experiments
I have rejected that hypothesis. Dr Reue
in his essay on Cretinism published in the
5th vol. of the Edinburgh Medical and Surgical journal
tells us that in those countries where Cretins
are most numerous, many people of sound
vigorous minds have Bromhouse, and that the
combination of Bromhouse and ^{Idiotism} ~~Gentleman~~
is altogether accidental. The Thyroid gland,
believe arrests nervous determination to the
brain only, but never arterial. Its use I believe
is chiefly as a waste gate to the larynx in
singing and speaking.

Glandule revuls when it was too vigorously
sent to the kidneys, & by the Thyroid
Gland when the larynx was over distin-
-cted with blood from head, or long spe-
-aking, or Singing. In contemplating
the frequent ~~dangerous~~ exposure of the brain
to an undue flux of blood from press,
from all the causes of capillary, pul-
-sary & venous, from long blood-spe-
-aking, from anger, and even from
the recumbent posture of the body in sleep,
I was led to inquire what provision
had been made to obviate the ill effects
sent by all those causes
of ~~the~~ a redundant quantity of blood to
the brain. I suggested formerly that
~~the~~ I thought it most probable the

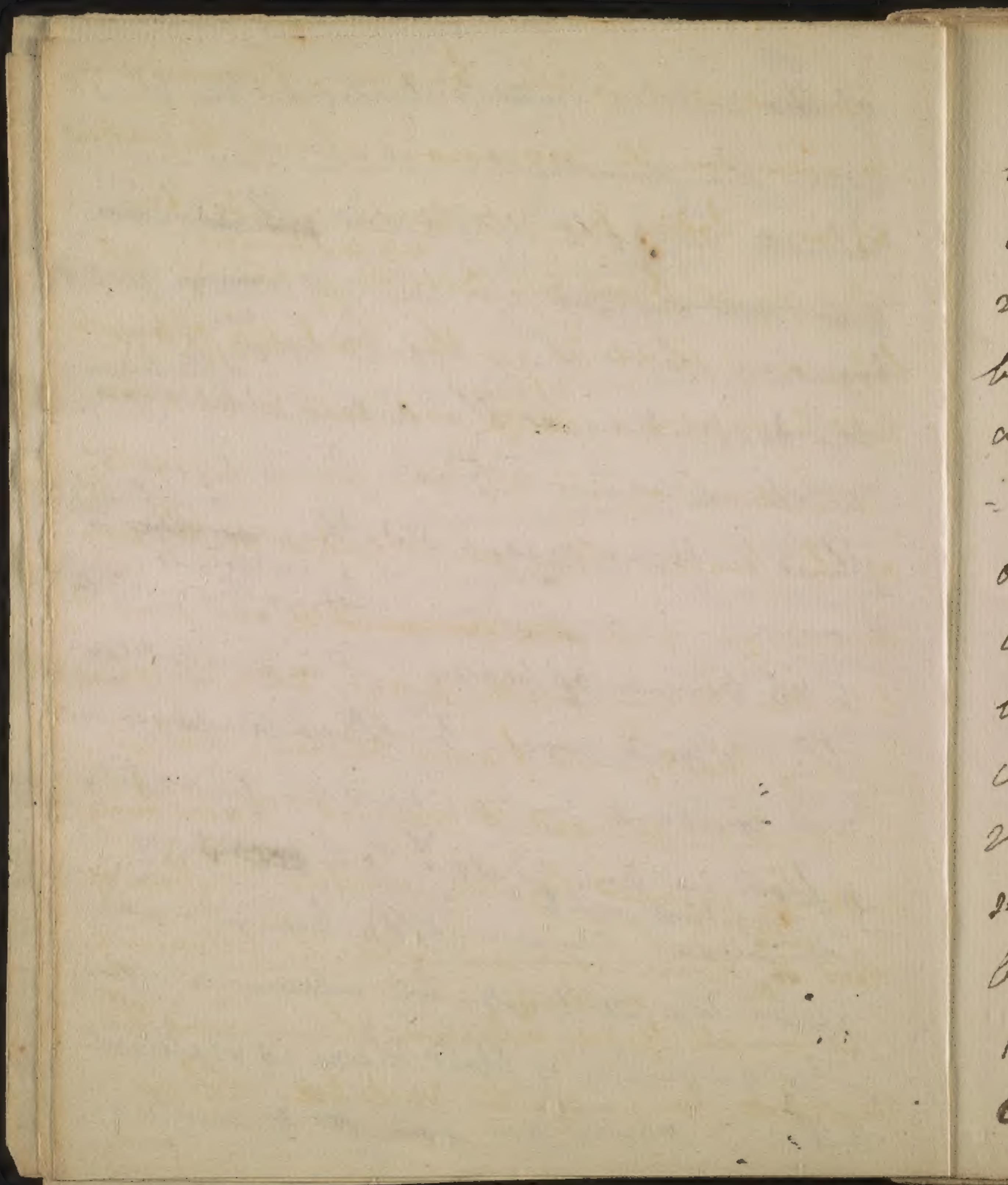


Ventricles of the brain served this important purpose. From a more close examination of this opinion, and from its connection with the means of obviating disease from the same causes in a continuous part of the body I have no doubt of its correctness. ~~To~~ The lungs & the liver and the pancreas obviate the ill effects of being over distended with blood for a while, by their ~~being~~ giving way as it were, that is by ~~their~~ increasing in their bulk, but this cannot take place in the brain.

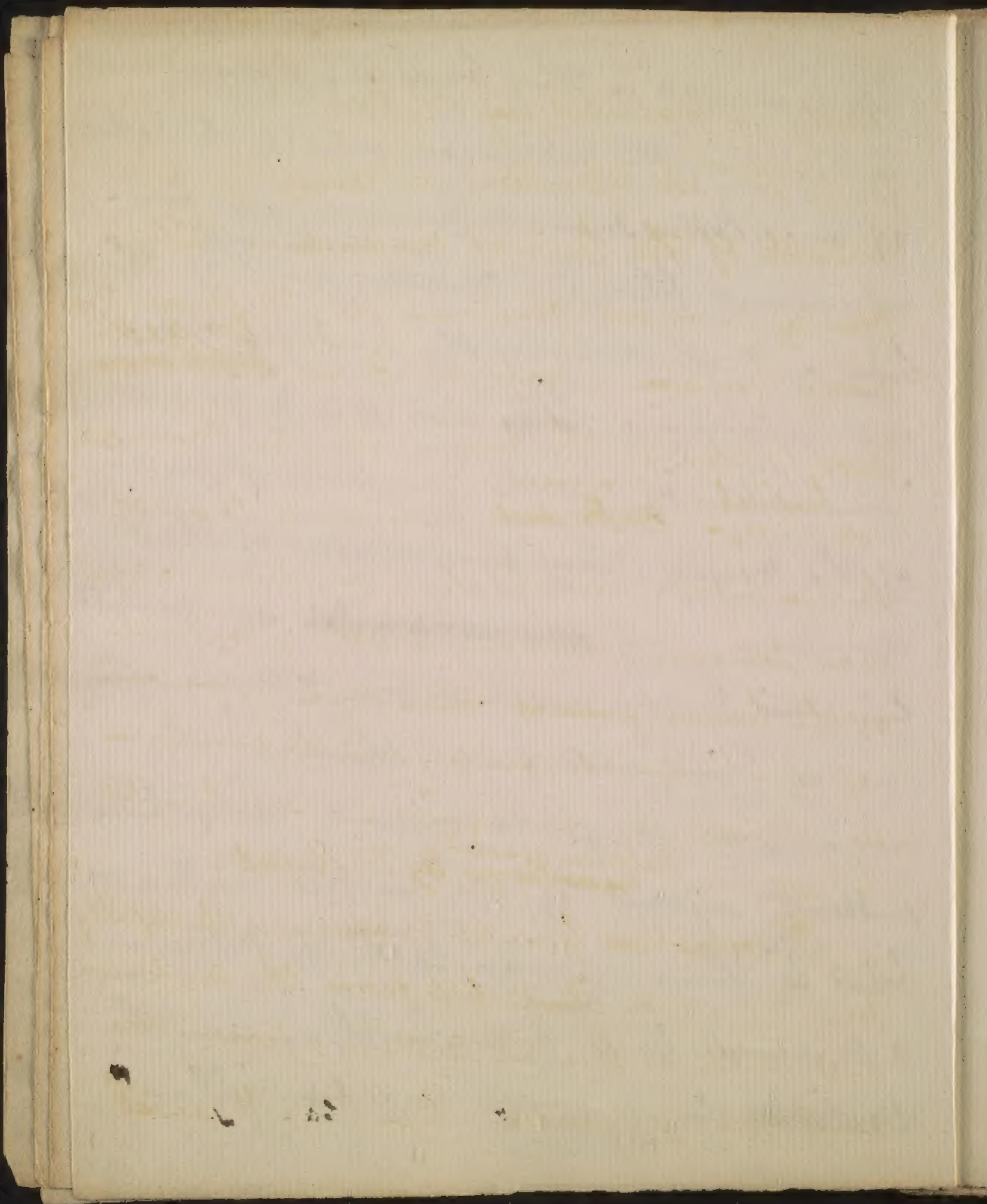
~~It~~ The Cranium prevents its dilatation; and this it is said to such a degree as even to prevent the elevation

✓ Indeed there can be no doubt of
this being the case, Baglivi lets us
be found six of coagulated blood in
the Ventricle of the famous Anatomist
Malpighi who died of an Apsophy.
Allowing the blood vessels to be intact
emptied of their blood to admit of this
large accumulation of it in the Ventricle
still it shows that they are capa-
ble by compression of affording room
for more than five or six ounces of
redundant blood.

of its arteries into pulsation. In this case, the ventricles which those cavities which we call Ventricle ~~which~~^{give way} ~~and~~^{were} or become ~~more~~^{were} rapid together, and thus afford more ^{room} for the distention of the Arteries & Veins with redundant blood. In a child of three or four years old, they ~~contain~~^{are found} to contain in a hydrocephalus from 3 to 506 drams of water. It is probable they afford room by their compression and contract for a greater quantity of blood in an adult. It is ~~impossible~~^{longitudinal} the lateral sinuses of the brain may assist the ventricles by retaining a greater quantity of blood than is natural to them, when an ~~excessive~~^{unusual} quantity of



Blood is sent to the brain. I proceed next
to mention the provision which the maker
of our bodies seems to have made for
redundant blood in another part of the
body, and that is in the medulla oblongata
and spinalis. ~~These~~ are said to be a com-
bination of all the component parts
of the brain. They are composed of the same
coverings, and ~~are provided~~ are provided
like the brain with arteries & veins which
convey blood ^{to} and from them. The
means employed to prevent their being
suddenly injured by an undue influx of
blood ^{into} ~~to~~ them appear to be the following.
1 A small space ^{or cavity} between them and the
~~osteal~~ bones of the vertebral. This



cavity is described by Portal
2 a small aperture or cavity in the
middle of the spinal marrow. This
cavity is most obvious in children. You
may see in a draft of it in ~~Gall's~~^{Dr Gall's}
~~Gall's~~
See plates of the brain in the Penry
hospital. ^{Zwanzig}
-varianc^y ~~Detected~~ describes a case of
Spina bifida in which a communication
was discovered between it & the 3rd ventricle
of the brain ~~and~~ ^{of} Thalamus by means
of this internal cavity, and its existence
is admitted by Pecchomini. Bourdin &
Malpighi ^{Cretos quoted} ~~described~~ by Dr Portal.

3 the ~~giant~~ spinal marrow is plentifully
supplied with blood vessels from the anterior
and posterior spinal arteries & from the
vertebral, intercostal, lumbar & sacral

N Dr Portal mentions two striking
facts in support of the opinion I have
advanced. 1 In a child affected with
Spina bifida he distinctly saw the tumor
enlarged in every respiration, and
bowed in every exhalation. This
child died. He found after death a cavity
large eno't to admit a guill which
communicated with the 3^d ventricle
of the brain. 2 He opened & insp'led the
vertebrae of several dogs & cats & distinctly
saw the Ventrilla spiralis enlarged &
bowed with each inspiration, and
exhalation. These motions extended
only to 3rd and 4th ~~sacral~~ cervical
vertebrae in both cases. Vol:xx. p:66.

arteries. The veins which return the
blood which is carried by them are
4 in number and larger than the
arteries - ~~one of them~~ ^{one of them is anterior, another} posterior,
and two are lateral. They are so large
Portal says that ^{they} might be called a
sinus. These veins probably serve by
their distension ~~to~~ aid the two cavities
~~of~~ ^{I have} mentioned in relieving the
pressure of the spinal marrow from the
ill effects of redundant blood when
thrown upon them.

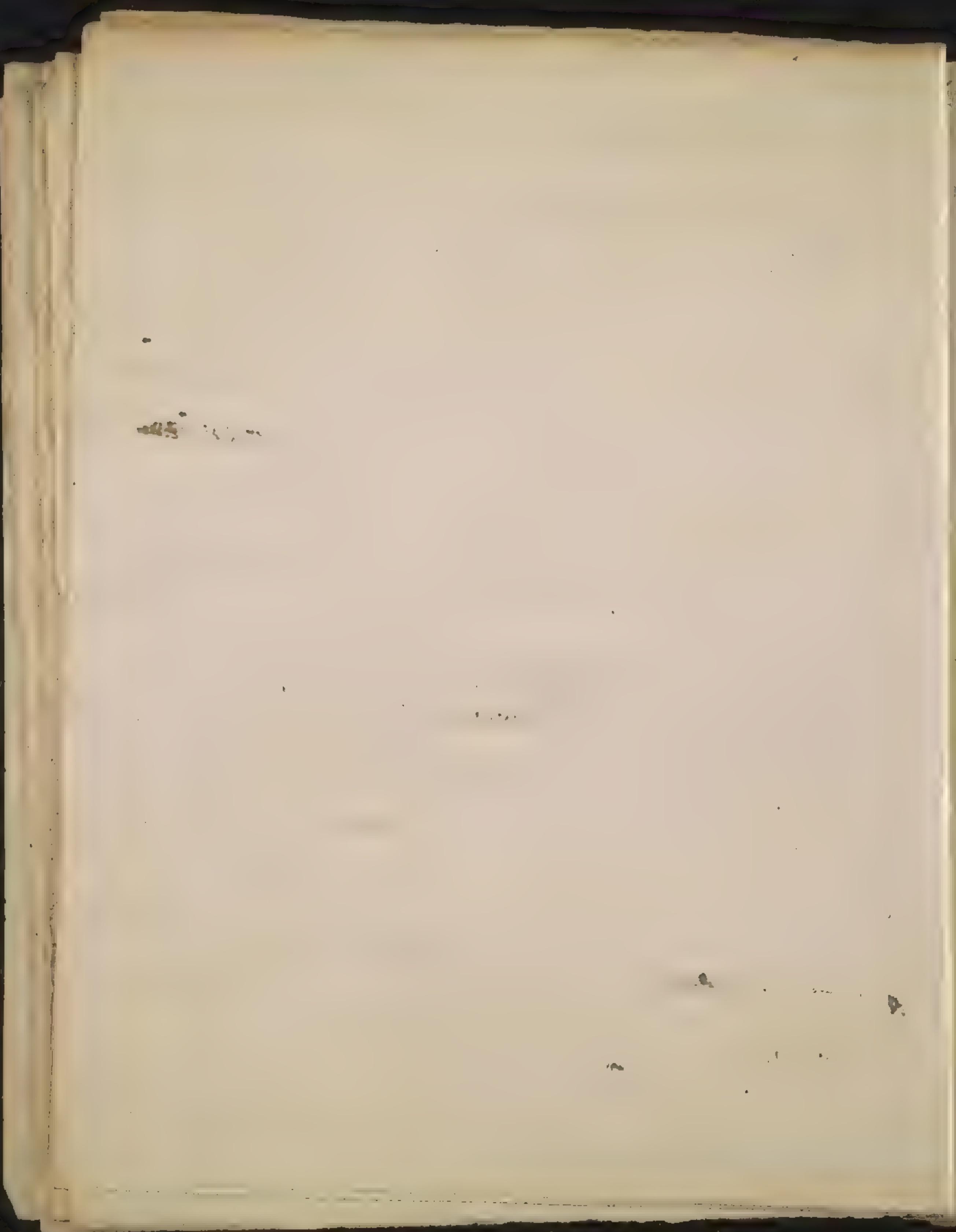
The diseases of the ~~external~~ spinal
marrow, or the brain in the vertebral
~~exterior~~ favor the theory I have
delivered of the uses of the cavities &c

X and 2nd by the water (in the Spina) Bifida
protrudes the coats and covers the
coats of the spinal marrow, whence
the water in the

V in which case it perfectly accord
in every respect with the Hydrocephalus
Calvarius ~~from its propositum
and adhesions, do not know if it
ought to be called~~

N found two external openings
instead of one. It ^{was} more
extended form of the same disease.

fida Sines ~~is~~ it which have been mentioned.
The Spina Bifida is nothing but an
external droopy of the spinal marrow
in so every respect similar to the ex-
ternal droopy of the brain, except ^{in the following particular} that
the external droopy of the brain is
induced by an opening of the sutures
of the brain - the Spina bifida, by the
absence ~~or~~ ^{and it} of a spinal process of
the Vertebrae. ^{we are told} Sometimes it appears
with a gaping ~~or~~ or opening between two
of the Vertebrae, — There is a case upon
record by Morgagni in which a suture
of ~~the~~ the Spina Bifida produced the
collapse of a brain distended with Hydro-
cephalus ^{N.} In this case the water
2 a severe pain in the back generally



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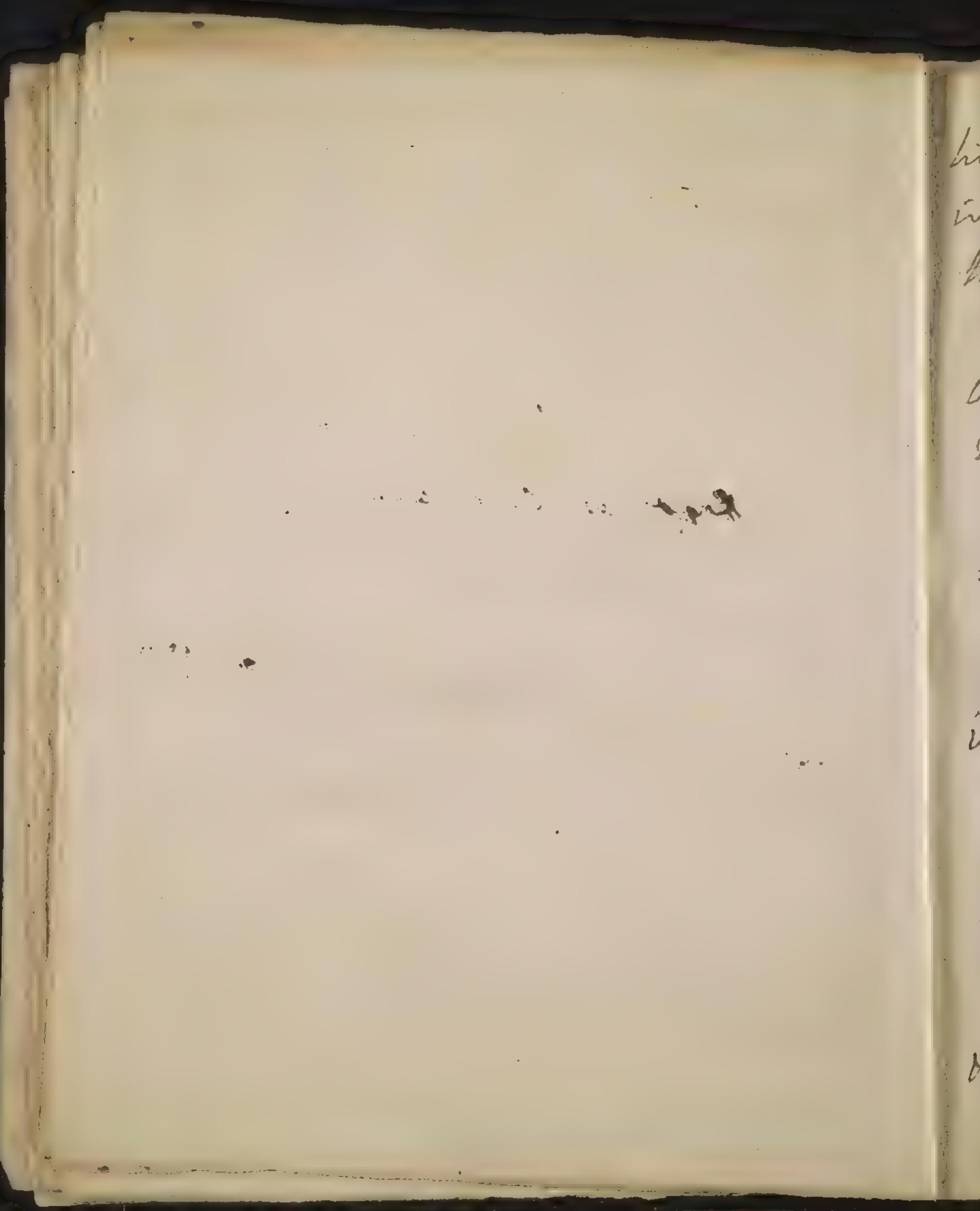
accompanies
fvers of great morbid action as certainly
as a pain in the head. may not this
be occasioned by the cavities & sinews I
have described, being so overcharged with
blood, as no longer to prevent its passing
upon and distending the ~~sinews~~
~~& other coverings~~
matter of the spinal marrow, and
thus to excite the pain I have mention-
ed.

3 may not the ~~pains in the~~ and
~~obstruction of the~~ ~~bowels~~ be
occurred often by ~~the~~ depression of
the nerves which issue from the spine
by the ~~spinal~~ spinal marrow being impeded
by too much blood, than by ~~any other~~

cause?

4 may not the weakness in the lower
trunk of the body,

in the lower



hurts, and Obstructions in the bowels
in fowls ~~do~~ be sometimes induced by
the same cause? —

But gentle! I will no longer rest the
opinion of the enfeebled state of the spinal
marrow upon conjecture & analogy. ~~do~~
This obscure and ~~dark~~ part of the body
has not escaped the anatomical eye &
knife of Dr Portal. In the 4th volume of his

Anatomy p: 112 he has the following remarks
which I ~~have~~ translated into our language.
~~which I have translated into our language.~~ The medulla spinalis says the
D^r) is often engorged and even contracted by
humors effused into the vertebral canal, or
between its membranes, on which engorge its
surface. These humors are water, blood, mucus
lymph, gelatinous & steatornaceous matters &
& pus or ichor which has been the effect of
inflammation". Besides these marks of disease



6

the Dr adds "induration, softness, inflammation
hypersensation and ulceration have been found
in the medulla spiralis, and there is no
doubt but that like the brain it is capable
of being affected by Concupison". He then
concludes by saying "in a word, the diseases
of the medulla spiralis have a great
affinity with the diseases of the brain,
and are more common than is generally
supposed". ~~In addition to the account of~~

~~The practical inference from all the~~
facts and opinions that have been ~~derived~~
are, the necessity and safety of ^{we} ~~removing~~
the brain from redundant blood. Were to live
agreeably to reason, the ventricles and ~~lungs~~
size of the brain would be sufficient
to ~~relieve~~ prevent injury to it in common

3 I treating upon pulmonary con-
gestion I advised the application
of Blister between the shoulders along
the cervical & ~~dorsal~~^{the} Dorsal Vertebral. I
have repeatedly seen them do more
service when applied there, than to the
sides or breast. may not the reason why
this be - the blister bringing congestion
in the spinal Vertebral which supply
a portion of nerves which unite with
the par vagum & great sympathetic nerves
which ^{we} are distributed to the Thoracic
& Abdominal viscera?

4 May not the efficacy of a Buzundy
~~pith~~^{the} plaster to the external parts of
the cervical and dorsal Vertebral, and
of other stimulating applications to the
same parts, be owing ~~to~~ in the Hopping

ans, but the pursuits, pleasures & vices of
civilized life, render them too scanty for
that purpose. The quantity of blood sent
to the brain requires the aid of the heart to
assist the ventricles and lateral sinews in
the uses I have ascribed to him.

✓ From the ^{use of the} waste cavities which I have
~~seen~~ described in the spinal marrow, it
is alike obvious that many diseases
in the nervous muscular parts of the
body which are supplied with nerves
from the spinal marrow, are, from the
inability of those cavities to afford ~~a~~ shelter
room for all the blood that is sent to
them, induced by ^{an excess of} ~~the~~ blood
in the spinal marrow, and that they
require, especially in their first stage,
remedies, the reverse of what are too often

~~Seraph - he owing to his sins~~ 7
~~inducing such actions in the spiritual~~
~~manasas, has,~~

V This, - from the summaries of its
cause ~~resembling~~ with Hydrocephalus
internus -

prescribed for them; I mean depleting medicines. I shall illustrate ~~what I have said~~ by ~~experience~~ ~~of~~ ~~sight~~ ~~know~~ what I mean by a reference of a single disease.

I have said ~~that~~ the Hydrocephalus internus is induced by ~~obstruction~~ ~~so much~~ ~~as to~~ ~~impair~~ ~~the~~ ~~blood~~ ~~being~~ ~~forced~~ ~~outward~~ ~~adjacent~~ ~~to~~ ~~the~~ ~~brain~~ ~~as~~ ~~to~~ ~~produce~~ ~~a~~ ~~passage~~ ~~of~~ ~~its~~ ~~excess~~ ~~parts~~ ~~into~~ ~~the~~ ~~Ventricles~~, or by the force of the blood forcing open the or widening the sutures ~~and~~ ~~filling~~ ~~them~~ thus pro-

- ducing a Hydrocephalus ~~internus~~ ~~externus~~. I have said further that a disease similar to the latter is produced in the spinal marrow by the same cause. but tells us that Dr Porta ~~tells us that~~ water is found in the ~~body~~ its cavities, ~~which~~ may be called white

Hydrocephalus ~~internus~~ & the spine which Bifidus is produced by water forcing its

✓ which are the effects of
fever. I have called them aphatic
States of fever. —

way outwards by the destruction of
a spinal process, or by insinuating
itself between two of the vertebral ~~processes~~
~~processes~~ might be called a Hydrovertebra-

-lis externus. ~~This is different from~~
I shall apply the facts & principles

I have thus delivered to several other

diseases in the sequel of our lectures.

However ~~that~~ ~~its~~ ~~peculiarities~~
the peculiarities in the brain I have said
noticed appear to be intended to prevent its
diseases, from many circumstances they
are not always sufficient in common
with the Spleen, Thymus & Thyroid glands
& glands ~~or~~ ~~on~~ ~~the~~ ~~brain~~ ~~for~~ ~~that~~ ~~purpose~~. The
~~blood~~ ~~diseases~~ of the brain from an
undue determination of blood to it are
numerous. At present, I shall ~~take~~
confine myself only to those diseases ^V

